

Dean K. Matsuura Manager Regulatory Affairs

September 11, 2009

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The Honorable Chairman and Members of the Hawaii Public Utilities Commission Kekuanaoa Building, First Floor 465 South King Street Honolulu, Hawaii 96813

Dear Commissioners:

Subject: Docket No. 2008-0083 – Hawaiian Electric 2009 Test Year Rate Case Hawaiian Electric's Responses to PUC SIRs 102, 104, and 105

Enclosed for filing are Hawaiian Electric Company, Inc.'s ("Hawaiian Electric") responses to the supplemental information requests ("SIRs") issued by the Commission to Hawaiian Electric on September 1, 2009, which are PUC SIRs 102, 104, and 105.

Very truly yours,

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Enclosures

cc: Division of Consumer Advocacy
Michael L. Brosch, Utilitech, Inc.
Joseph A. Herz, Sawvel & Associates, Inc.
Dr. Kay Davoodi, Department of Defense
James N. McCormick, Department of Defense
Theodore E. Vestal, Department of Defense
Ralph Smith, Larkin & Associates

PUC-SIR-102

Schedule E

References: (1) PUC-IR-102; (2) Interim Decision and Order dated July 2, 2009, Docket No. 2008-0083 ("Interim Decision and Order"), Part II.2(b) Employee Electricity Rate Discount, at 11; and (3) Revised Schedules Resulting from Interim Decision and Order dated July 8,2009 ("Revised Schedules"), Exhibit 3, at 10.

In the Interim Decision and Order, the Commission states in part:

The commission is concerned with the justness and reasonableness of electricity discounts for HECO employees and former employees during these times of economic crisis and the critical need to incentivize energy conservation. The proposed Schedule E on page 24 of Exhibit HECO-106 provides full-time HECO employees and former employees with electricity rates that are two-thirds of the effective Schedule R rate for the first 825 kWh of consumption in each month. Such rates may be unduly discriminatory and under-allocate electricity costs to HECO employees and former employees. For purpose of interim rates, the commission directs HECO to remove Schedule E and adjust other rates based on this change (emphasis added).

PUC-IR-102 requested HECO to:

(1) confirm whether Schedule R customers were subsidizing Schedule E customers in the past prior to the issuance of the Interim Decision and Order and that, as a result of the removal of Schedule E, Schedule R revenues at current effective rates have been increased by \$1,066,900 as indicated by HECO in the Revised Schedules; and (2) show how Schedule R rates and other rate schedules will be adjusted accordingly as a result of the removal of Schedule E (emphasis added).

HECO's response to PUC-IR-102 states:

Yes, in the current base rate design (HECO test year 2005 rates, effective June 20, 2008) Schedule E customers are subsidized by Schedule R customers and by all other rate schedule customers. The discount amount for Schedule E customers is allocated in final rate design to all rate schedules (emphasis added). The removal of the Schedule E discount from the estimate of revenues at current effective rates increases Schedule R revenues by \$1,066,900, as shown in HECO T-3 Attachment 4 of Hawaiian Electric's revised schedules, filed July 8, 2009 in response to the Interim Decision and Order. The amount of interim rate increase allocation to Schedule R and to other rate schedules is lower by .\$1,066,900 due to the removal of the Schedule E discount (emphasis added), as shown in Exhibit

2A, page 3, of Hawaiian Electric's revised schedules in response to the Interim Decision and Order.

HECO's response to PUC-IR-102 is informative and appreciated. For the docket record, it is concurred that, as a result of the removal of Schedule E discount, Schedule R revenues at current effective rates would increase by \$1,066,900 as shown in HECO T-3 Attachment 4 of the Revised Schedules. It is our understanding that revenues increase of \$1,066,900 resulted from the adjustments of "Schedule E adj." line item of \$996,300 and the "2007 Interim Rate Increase of 7.09%" line item of \$70,600 as indicated in Exhibit 3, page 10, of the Revised Schedules. It is also our understanding that, as a result of the removal of Schedule E, the "Base Revenue" for Schedule R has been increased from \$372,926,300 to \$373,922,600 (i.e., an increase of \$996,300) thereby lowering the "Class Increase" from 5.85% to 5.83% (see Exhibit 2A, page 3). However, the intent of PUC-IR-102 was to determine whether the additional revenues, as a result of the removal of Schedule E, would be implemented to reduce the electricity rates of Non-Schedule E customers since these customers were subsidizing Schedule E customers in the current base rate design as indicated by HECO's response above. Although the "Class Increase" is "lowered" from 5.85% to 5.83%, the referenced Exhibit 2A, page 3, does not show how the additional revenues, as a result of the removal of Schedule E, would be implemented in some way to reduce the electricity rates for the Non-Schedule E customers. Please illustrate whether and/or how the additional revenues would be implemented into the final rate design to reduce the electricity rates of Non-Schedule E customers.

HECO Response:

See Attachment 1, page 1 to this response which illustrates that the interim rate increase dollar amount and interim rate increase percentage for each rate class is lower with the Schedule E discount removed than with the Schedule E discount included. If the approved interim rate increase were to become the approved final revenue increase, the difference between the revenue increase assigned to each rate class that is associated with the removal of the Schedule E discount would be reflected in the final rate design as a lower energy charge per kWh.

Comparative Illustration For Schedule E Discount

HAWAIIAN ELECTRIC COMPANY, INC. DOCKET NO. 2008-0083, TEST-YEAR 2009

INTERIM RATE INCREASE SUMMARY OF REVENUE INCREASE BY CLASS

	Α	В	С	D
	Revenue Increase		Interim Ra	te Increase
Rate Class	No Sch E <u>Discount</u>	With Sch E Discount	No Sch E Discount	With Sch E Discount
	(\$000s)	(\$000s)	(%)	(%)
Schedule R	\$21,817.0	\$22,198.0	5.83	5.95
Schedule G	\$2,667.6	\$2,714.2	3.59	3.65
Schedule J	\$20,669.4	\$21,030.3	6.33	6.44
Schedule H	\$335.7	\$341.6	6.37	6.48
Schedule PS	\$5,274.2	\$5,366.3	4.20	4.27
Schedule PP	\$7,825.8	\$7,931.4	6.17	6.26
Schedule PP Direct Served Customer	\$1,434.5	\$1,490.6	1.00	1.03
Schedule PT	\$628.7	\$639.7	2.72	2.77
Schedule F	\$390.7	\$397.5	6.15	6.26
Total	\$61,043.6	\$62,109.6	5.06	5.15

Source:

Columns A, C: Exhibit 2A, Page 3, of HECO's Revised Schedules, filed July 8, 2009

Columns B, D: PUC-SIR-102, Attachment 1, Page 3

PUC-SIR-102 DOCKET NO. 2008-0083 ATTACHMENT 1 PAGE 2 OF 4

Illustration If Schedule E Discount Was Retained

HAWAIIAN ELECTRIC COMPANY, INC. DOCKET NO. 2008-0083, TEST-YEAR 2009

INTERIM RATE INCREASE CALCULATION OF REVENUE TO BE RECOVERED In \$000s

L1	Estimated Increase in Total Operating Revenue to be Recovered from Rate Classes	\$62,164.9
L2	Late Payment Charges in Increase in Other Operating Revenue	\$55.3
L3 = L1 - L2	Increase in Total Operating Revenue To be Recovered from Rate Classes	\$62,109.6

Source:

- L1: HECO Revised Results of Operations, Exhibit 1, Page 1, of HECO's Revised Schedules, filed July 8, 2009, plus \$1,066.9 for Sch E Discount
- L2: $L1 \times 0.089\% = 55.3^{-1}

¹ Docket No. 2008-0083, Stipulated Settlement Letter, Exhibit 1, Page 10, filed May 15, 2009.

Illustration If Schedule E Discount Was Retained

HAWAIIAN ELECTRIC COMPANY, INC. DOCKET NO. 2008-0083, TEST-YEAR 2009

INTERIM RATE INCREASE SUMMARY OF REVENUE INCREASE BY CLASS

	Α	В	С	D
	Interim Rate Increase Allocation		Interim Rate	Increase
Rate Class	Allocation	Revenue Increase	Base Revenue	Class Increase
	(%)	(\$000s)	(\$000s)	(%)
Schedule R	35.74%	\$22,198.0	\$372,926.3	5.95
Schedule G	4.37%	\$2,714.2	\$74,291.0	3.65
Schedule J	33.86%	\$21,030.3	\$326,658.9	6.44
Schedule H	0.55%	\$341.6	\$5,271.7	6.48
Schedule PS	8.64%	\$5,366.3	\$125,723.8	4.27
Schedule PP ^{1,2}	12.77%	\$7,931.4	\$126,768.7	6.26
Schedule PP				
Direct Served Customer ^{1,2}	2.40%	\$1,490.6	\$144,082.8	1.03
Schedule PT	1.03%	\$639.7	\$23,126.3	2.77
Schedule F	0.64%	\$397.5	\$6,354.8	6.26
Total	100.00%	\$62,109.6	\$1,205,204.3	5.15

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Column A: Stipulated Settlement Letter Dated May 15, 2009, Docket No. 2008-0083,

Exhibit 1, Pages 84-85.

note 1, Column A: Directly Served Customers are assigned a revenue increase of 50% of the

overall revenue percentage increase. The remaining Sch PP customers are allocated

remaining percentage increase to equal Schedule PP allocation of 15.17%.

See Settlement Letter, Exhibit 1, page 85. Revenue at current effective rates = \$1,296,374.

Column B: Column A x \$62,109.6

note 2, Column C: Schedule PP Not Directly Served constitute 46.8% of forecasted Schedule PP Base Revenue.

Schedule PP Directly Served constitute 53.2% of forecasted Schedule PP Base Revenue.

Column C: Estimate of Revenue at Base Rates, Including Employee Discount.

See PUC-SIR-102, Attachment 1, Page 4

Column D: (Column B + Column C) * 100

Hawaiian Electric Company, Inc. Revenues at Present Rates and Current Effective Rates - LOWER SALES and December 2008 Fuel Prices Employee Discount Included in Schedule R

	TY 2009 mWh Sales	Base Revenue (\$000s)	Fuel Oil Adjustment (\$000s)	Revenue at Present Rates (\$000s)	2007 Interim Rate Increase (\$000s)	Revenue at Current Effective Rates (\$000s)
		(A)	(B)	[C]=(A)+(B)	(D)	(E)=[C]+(D)
Rates						
Sched R	2,028,600	\$372,926.3	\$3,083.5	\$376,009.8	\$26,440.5	\$402,450.3
Sched G	376,100	\$74,291.0	\$571.7	\$74,862.7	\$5,207.8	\$80,070.5
Sched H	33,100	\$5,271.7	\$50.3	\$5,322.0	\$380.1	\$5,702.1
Sched J	2,040,267	\$326,658.9	\$3,101.2	\$329,760.1	\$19,370.9	\$349,131.0
Sched PP	1,943,260	\$270,851.5	\$2,953.8	\$273,805.3	\$12,322.4	\$286,127.7
Sched PS	850,797	\$125,723.8	\$1,293.2	\$127,017.0	\$9,346.3	\$136,363.3
Sched PT	175,076	\$23,126.3	\$266.1	\$23,392.4	\$1,512.5	\$24,904.9
Sched F	37,500	\$6,354.8	\$57.0	\$6,411.8	\$456.9	\$6,868.7
Total	7,484,700	\$1,205,204.3	\$11,376.8	\$1,216,581.1	\$75,037.4	\$1,291,618.5

Adjusted for Reduced sales

Revenues updated 04/22/09 for:

Two (2) Schedule PP Directly served customers who should not have been Schedule PP Directly Served.

One (1) Schedule J customer who should have been Schedule PP Directly Served.

One (1) Schedule PS customer who should have been Schedule PP Directly Served.

2007 Interim rate increase rates effective November 1, 2008.

Revenues updated 05/01/09 for December 2008 fuel prices: ECAF = 0.152 cents per kWh.

Revenues updated 07/02/09 to remove Employee Discount Adjustment from Schedule R Base Revenue.

Source: Pricing Division

PUC-SIR-104

Time-of-Use (TOU)

References: (1) PUC-IR-104; (2) HECO 2009 Test Year, Direct Testimonies and Exhibits, Docket No. 2008-0083, HECO T-22, at 42; (3) Stipulated Settlement Letter dated May 15, 2009, Docket No. 2008-0083, HECO T-22, Attachment 2, Final Settlement, at 3; and (4) Interim Decision and Order dated July 2, 2009, Docket No. 2008-0083.

PUC-IR-104 requested:

(1) an average daily system demand profile for each month for the most recent 12 consecutive months (emphasis added); (2) the basis for the proposed on-peak and off-peak periods for Schedule TOU-R in comparison to the average daily system demand profiles; (3) an explanation as to why the proposed on-peak and off-peak periods for Schedule TOU-R are more reasonable than the current TOU-R three rating periods; (4) the new TOU-R charges for the proposed on-peak and off-peak periods as pertinent to the Commission's Interim Decision and Order dated July 2, 2009; (5) the basis, along with workpapers showing calculations, for the new TOU-R charges other than to incent customers to shift their electric consumption load from on-peak period to off-peak period (emphasis added); (6) reasonable recommended guidelines, along with any supporting research material, on what customers may do to shift their electric consumption away from on-peak period to off-peak period; and (7) an explanation as to why the new TOU-R charges are just, reasonable and in the public interest.

HECO's response to PUC-IR-104 is helpful and appreciated. For the docket record, please provide (1) an average daily system demand profile for each month during the 2009 Test Year; (2) supplementary explanation of how the average hourly loads were derived for the "Hour Ending"; (3) justification to switch from the current TOU-R three rating periods to two rating periods; (4) workpapers showing calculations and/or justifications for the derivation of the proposed TOU-R charges of 43.2113 ¢/kWh for on-peak period and 22.2113 ¢/kWh for off-peak period (see HECO T-22, page 41) other than the basis to incent customers to shift their electric consumption load from on-peak period to off-peak period; and (5) the projected TOU-R charges in ¢/kWh for on-peak and off-peak periods as if an equivalent amount approved by the Commission's Interim Decision and Order dated July 2, 2009; in Docket No. 2008-0083, would implemented into the final rate design.

HECO Response:

1. See Attachment 1 to this response for the estimated average hourly loads for the 2009 test year.

- 2. For both the estimated average hourly loads for the 2009 test year (response to PUC-SIR-104, Attachment 1) and the average hourly loads for 2008 (response to PUC-IR-104, Attachment 1), the average hourly load represents the simple average of all of the load values for the month at that hour point. For example, the January value at 1 a.m. in the attachments is the simple average of all of the load values at 1 a.m. for every day in the month of January.
- 3. As indicated in the response to PUC-IR-104, question 3, the on-peak and off-peak periods for the proposed Schedule TOU-R are more usable than the current Schedule TOU-R, which has three rating periods. The proposed Schedule TOU-R with two rating periods starts off-peak hours at 8 p.m. versus 9 p.m. in the existing Schedule TOU-R, increasing the opportunity to shift load to off-peak during a period where people are normally awake. The proposed Schedule TOU-R has nineteen consecutive off-peak hours daily, from 8 p.m. to 3 p.m., which allows residential customers a greater opportunity to shift load and/or undertake and complete activities that use electricity during off-peak hours only.
- 4. The calculations for the derivation of the proposed Schedule TOU-R are described in HECO T-22, pages 42-43, and illustrated in HECO's response to PUC-IR-104, Attachment 2. The on-peak time-of-use energy charge is 17 cents per kWh greater than the sum of the Schedule R first tier non-fuel energy charge plus the base fuel energy charge. The off-peak time-of-use energy charge is 4 cents per kWh less than the sum of the Schedule R first tier non-fuel energy charge plus the base fuel energy charge. The proposed usage charges in Schedule TOU-R are intended to impose the difference between the non-fuel energy charge tiers in Schedule R on to the Schedule TOU-R rate design. The difference between the kWh usage tiers in the proposed Schedule R is approximately one cent per kWh, so for Schedule TOU-R customers, a usage charge of 1 cent per kWh is added for usage that would otherwise

fall into the second tier of usage on Schedule R, and a usage charge of 2 cents per kWh is imposed for usage that would otherwise fall into the third tier of non-fuel energy charges on Schedule R.

5. If the interim rate increase for test year 2009 were to become the final award, the Schedule TOU-R on-peak energy rate is estimated to be 33.5187 cents per kWh and the off-peak energy rate is estimated to be 12.5187 cents per kWh. On Schedule R, the base fuel energy charge is estimated to be 9.0708 cents per kWh and the first tier non-fuel energy charge is estimated to be 7.4479 cents per kWh, for a sum of 16.5187 cents per kWh. For both the proposed Schedule R and proposed Schedule TOU-R, a proposed purchased power adjustment of 2.6100 cents per kWh applies to all kWh. See HECO's response to PUC-SIR-105 for the derivation of final rates in the 2009 test year rate case.

PUC-SIR-104.1. Average hourly loads for the 2009 Test Year, in Net MW

Hour Ending:

	1 AM	2	3	4	5	6	7	8	9	10	11	12 Noon
January -	629.6	604.1	591.1	594.7	626.7	705.8	796.9	835.4	902.3	950.5	971.4	977.6
February	626.5	602.6	591.1	594.3	628.0	712.8	811.8	854.3	923.1	968.5	986.7	991.8
March	629.6	606.0	595.7	598.4	628.8	702.6	785.1	845.6	917.5	960.6	982.8	990.2
April	627.3	611.9	605.1	607.2	629.1	697.0	783.8	848.5	926.2	979.2	1005.5	1013.7
May	656.1	635.0	625.3	626.6	650.1	714.5	804.2	878.7	952.9	1000.4	1026.3	1035.6
June	689.3	658.0	643.2	645.1	679.5	749.5	840.3	921.9	991.1	1034.5	1058.1	1065.3
July	692.1	674.5	666.9	667.5	684.7	734.1	809.4	892.9	978.4	1041.7	1075.5	1090.4
August	723.2	699.8	688.8	689.3	714.3	780.1	862.0	938.5	1020.3	1074.6	1105.7	1118.5
September	722.3	698.1	687.7	690.2	720.7	798.6	881.6	955.3	1032.6	1084.2	1112.3	1122.9
October	702.3	683.7	674.8	677.1	703.1	774.1	856.1	927.1	1008.6	1064.0	1092.2	1106.2
November	682.3	655.0	641.6	644.5	678.1	755.2	836.8	903.2	979.9	1026.8	1049.4	1060.2
December	672.8	636.9	618.2	618.0	659.0	742.8	829.8	882.3	947.7	988.0	1003.9	1008.6
_												
_	1 PM	2	3	4	5	6	7	8	9	10	11	12 Mid.
January	1 PM 980.0	974.5	968.5	968.4	5 964.4	990.2	7 1051.7	991.3	925.8	846.5	749.5	12 Mid. 673.4
January [–] February	•••	974.5 987.9	968.5 983.5		964.4 977.5		_		925.8 948.6	846.5 860.8	749.5 755.3	
-	980.0 993.4 995.0	974.5 987.9 991.8	968.5 983.5 987.3	968.4 981.0 986.2	964.4 977.5 978.8	990.2	1051.7 1064.9 1035.0	991.3 1018.6 1003.8	925.8 948.6 937.9	846.5 860.8 849.5	749.5 755.3 749.2	673.4 670.9 672.4
February	980.0 993.4	974.5 987.9	968.5 983.5	968.4 981.0	964.4 977.5	990.2 991.9	1051.7 1064.9	991.3 1018.6	925.8 948.6	846.5 860.8	749.5 755.3	673.4 670.9
February March	980.0 993.4 995.0	974.5 987.9 991.8	968.5 983.5 987.3 1015.1 1043.1	968.4 981.0 986.2	964.4 977.5 978.8	990.2 991.9 983.3	1051.7 1064.9 1035.0	991.3 1018.6 1003.8	925.8 948.6 937.9	846.5 860.8 849.5	749.5 755.3 749.2	673.4 670.9 672.4
February March April	980.0 993.4 995.0 1022.1	974.5 987.9 991.8 1018.3	968.5 983.5 987.3 1015.1	968.4 981.0 986.2 1012.4	964.4 977.5 978.8 998.0	990.2 991.9 983.3 992.2	1051.7 1064.9 1035.0 1036.2	991.3 1018.6 1003.8 1037.9	925.8 948.6 937.9 949.8	846.5 860.8 849.5 839.9	749.5 755.3 749.2 732.7	673.4 670.9 672.4 658.8
February March April May	980.0 993.4 995.0 1022.1 1042.2	974.5 987.9 991.8 1018.3 1041.8	968.5 983.5 987.3 1015.1 1043.1	968.4 981.0 986.2 1012.4 1042.0	964.4 977.5 978.8 998.0 1027.8	990.2 991.9 983.3 992.2 1009.4	1051.7 1064.9 1035.0 1036.2 1010.3	991.3 1018.6 1003.8 1037.9 1038.7	925.8 948.6 937.9 949.8 972.0	846.5 860.8 849.5 839.9 878.8	749.5 755.3 749.2 732.7 775.8	673.4 670.9 672.4 658.8 695.5
February March April May June	980.0 993.4 995.0 1022.1 1042.2 1071.4	974.5 987.9 991.8 1018.3 1041.8 1071.5	968.5 983.5 987.3 1015.1 1043.1 1072.5	968.4 981.0 986.2 1012.4 1042.0 1068.9	964.4 977.5 978.8 998.0 1027.8 1055.8	990.2 991.9 983.3 992.2 1009.4 1039.2	1051.7 1064.9 1035.0 1036.2 1010.3 1020.8	991.3 1018.6 1003.8 1037.9 1038.7 1050.3	925.8 948.6 937.9 949.8 972.0 1003.7	846.5 860.8 849.5 839.9 878.8 927.7	749.5 755.3 749.2 732.7 775.8 830.5	673.4 670.9 672.4 658.8 695.5 742.8
February March April May June July	980.0 993.4 995.0 1022.1 1042.2 1071.4 1100.2	974.5 987.9 991.8 1018.3 1041.8 1071.5 1099.7	968.5 983.5 987.3 1015.1 1043.1 1072.5 1099.3	968.4 981.0 986.2 1012.4 1042.0 1068.9 1095.1	964.4 977.5 978.8 998.0 1027.8 1055.8 1079.4	990.2 991.9 983.3 992.2 1009.4 1039.2 1052.8	1051.7 1064.9 1035.0 1036.2 1010.3 1020.8 1029.1	991.3 1018.6 1003.8 1037.9 1038.7 1050.3 1067.4	925.8 948.6 937.9 949.8 972.0 1003.7 1001.1	846.5 860.8 849.5 839.9 878.8 927.7 907.9	749.5 755.3 749.2 732.7 775.8 830.5 802.8	673.4 670.9 672.4 658.8 695.5 742.8 728.5
February March April May June July August	980.0 993.4 995.0 1022.1 1042.2 1071.4 1100.2 1126.6	974.5 987.9 991.8 1018.3 1041.8 1071.5 1099.7 1127.9	968.5 983.5 987.3 1015.1 1043.1 1072.5 1099.3 1130.1	968.4 981.0 986.2 1012.4 1042.0 1068.9 1095.1 1128.1	964.4 977.5 978.8 998.0 1027.8 1055.8 1079.4 1114.4	990.2 991.9 983.3 992.2 1009.4 1039.2 1052.8 1092.1	1051.7 1064.9 1035.0 1036.2 1010.3 1020.8 1029.1 1092.2	991.3 1018.6 1003.8 1037.9 1038.7 1050.3 1067.4 1118.4	925.8 948.6 937.9 949.8 972.0 1003.7 1001.1 1049.9	846.5 860.8 849.5 839.9 878.8 927.7 907.9 953.5	749.5 755.3 749.2 732.7 775.8 830.5 802.8 846.4	673.4 670.9 672.4 658.8 695.5 742.8 728.5 765.8
February March April May June July August September	980.0 993.4 995.0 1022.1 1042.2 1071.4 1100.2 1126.6 1132.1	974.5 987.9 991.8 1018.3 1041.8 1071.5 1099.7 1127.9 1132.4	968.5 983.5 987.3 1015.1 1043.1 1072.5 1099.3 1130.1 1132.6	968.4 981.0 986.2 1012.4 1042.0 1068.9 1095.1 1128.1 1127.7	964.4 977.5 978.8 998.0 1027.8 1055.8 1079.4 1114.4 1109.6	990.2 991.9 983.3 992.2 1009.4 1039.2 1052.8 1092.1 1095.1	1051.7 1064.9 1035.0 1036.2 1010.3 1020.8 1029.1 1092.2 1147.5	991.3 1018.6 1003.8 1037.9 1038.7 1050.3 1067.4 1118.4 1108.4	925.8 948.6 937.9 949.8 972.0 1003.7 1001.1 1049.9 1037.7	846.5 860.8 849.5 839.9 878.8 927.7 907.9 953.5 945.8	749.5 755.3 749.2 732.7 775.8 830.5 802.8 846.4 844.0	673.4 670.9 672.4 658.8 695.5 742.8 728.5 765.8 765.2
February March April May June	980.0 993.4 995.0 1022.1 1042.2 1071.4	974.5 987.9 991.8 1018.3 1041.8 1071.5	968.5 983.5 987.3 1015.1 1043.1 1072.5	968.4 981.0 986.2 1012.4 1042.0 1068.9	964.4 977.5 978.8 998.0 1027.8 1055.8	990.2 991.9 983.3 992.2 1009.4 1039.2	1051.7 1064.9 1035.0 1036.2 1010.3 1020.8	991.3 1018.6 1003.8 1037.9 1038.7 1050.3	925.8 948.6 937.9 949.8 972.0 1003.7	846.5 860.8 849.5 839.9 878.8 927.7	749.5 755.3 749.2 732.7 775.8 830.5	673.4 670.9 672.4 658.8 695.5 742.8

PUC-SIR-105

Rate Design - Proposed Rates

References: (1) PUC-IR-105; (2) HECO 2009 Test Year, Direct Testimonies and Exhibits, Docket No. 2008-0083, HECO T-22, at 26-47; (3) Stipulated Settlement Letter dated May 15, 2009, Docket No. 2008-0083, HECO T-22, Attachment 2, Final Settlement, at 1-3; (4) Interim Decision and Order dated July 2, 2009, Docket No. 2008-0083; and (5) Order (dated June 20, 2008) Granting Hawaiian Electric Company, Inc.'s Motion to Adjust Interim Increase Filed on May 21,2008, Docket No. 2006-0386.

PUC-IR-105 requested:

(1) revised rates for all rate schedules (i.e. rates/charges for all customer classes) resulting from the Commission's Interim Decision and Order dated July 2, 2009, in Docket No. 2008-0083, including but not limited to based fuel energy charge, non-fuel energy charge, etc.; and (2) revised rates for all rate schedules resulting from the Commission's Interim Decision and Order No. 23749 as modified by Order (dated June 20, 2008) Granting Hawaiian Electric Company, Inc.'s Motion to Adjust Interim Increase Filed on May 21, 2008, in Docket No. 2006-0386.

For the docket record, the intent of the first part of PUC-IR-105 was to request HECO for estimates of all rate schedules as if the amount equivalent to the 2009 interim increase (approved by Commission's Interim Decision and Order dated July 2, 2009, in Docket No. 2008-0083) would be implemented into the final rate design for each customer class (i.e., similar to the projection of proposed rates/charges in Docket No. 2008-0083, HECO T-22, pages 26 to 47) for the following rates/charges:

- 1. Customer charges;
- 2. Base fuel energy charges;
- 3. Non-fuel energy charges;
- 4. Minimum charges; and
- 5. Other applicable charges.

Likewise, the intent of the second part of PUC-IR-105 was to request HECO for estimates of all rate schedules as if the amount equivalent to the 2007 interim increase (approved by Commission's Interim Decision and Order No. 23749 as modified by Order, dated June 20, 2008, Granting Hawaiian Electric Company, Inc.'s Motion to Adjust Interim Increase Filed on May 21, 2008, in Docket No. 2006-0386) would be implemented into the final rate design for each customer class (i.e., similar to the projection of proposed rates/charges in Docket No. 2008-0083, HECO T-22, pages 26 to 47) for the for the following rates/charges.

- 1. Customer charges;
- 2. Base fuel energy charges;
- 3. Non-fuel energy charges;

- 4. Minimum charges; and
- 5. Other applicable charges.

HECO Response:

In order to respond to this request, many assumptions have to be made regarding the allocation of the revenue increase to rate classes and the allocation of revenue increase within rate classes to the billing elements such as customer charge, energy charge, demand charge, and minimum charge. Any changes in the assumptions will affect the estimated results. For the estimated test year 2009 final rates at the same revenue level as the interim, this response assumes that the allocation of revenue increase and the proposed customer charges, demand charges, and minimum charges are as proposed in the settlement letter filed May 15, 2009. For the estimated test year 2007 final rates at the same revenue level as the interim, this response assumes that the allocation of revenue increase and the proposed customer charges, demand charges, and minimum charges are as proposed in the settlement letter in that case filed September 6, 2007. The estimated test year 2009 final rates also implicitly assume that the test year 2007 final rates, once in place, yield the same revenue to each respective rate class as the test year 2009 estimate of the sum of revenue from the 2005 base rates plus the revenue from the 2007 interim rate increase. Furthermore, the estimated test year 2009 final rates assume that the proposed purchased power adjustment clause is approved. Attachment 1 to this response shows the estimated test year 2007 final rates at the same revenue level as the interim. Attachment 2 shows the estimated test year 2009 final rates at the same revenue level as the interim. Attachment 3 shows the estimated test year 2009 charges for the purchased power adjustment clause.

PUC-SIR-105 DOCKET NO. 2008-0083 ATTACHMENT 1 PAGE 1 OF 8

Hawaiian Electric Company Estimated TY 2007 Final Rates if Interim Award Becomes Final

SCHEDULE R

CUST	TOMER	CHAR	GF.
-		OI IM	

1 PHASE SERVICE	\$8.00	\$/mo
3 PHASE SERVICE	\$17.00	\$/mo

NON-FUEL ENERGY CHARGE: cents/kwh

0 - 350 kWh 8.9288 351 - 1200 kWh 9.8828 Over 1200 kWh 10.7537

BASE FUEL ENERGY CHARGE: 10.9252 cents/kwh

MINIMUM CHARGE 1 PHASE: \$16.00 \$/mo MINIMUM CHARGE 3 PHASE: \$22.00 \$/mo

SCHEDULE TOU-R

CUSTOMER CHARGE:

1 PHASE SERVICE \$9.50 \$/mo 3 PHASE SERVICE \$17.50 \$/mo

TOU ENERGY:

PRIORITY PEAK PERIOD 24.8540 cents/kwh
MID PEAK PERIOD 21.8540 cents/kwh
OFF PEAK PERIOD 16.3540 cents/kwh

MINIMUM CHARGE 1 PHASE: \$17.50 \$/mo
MINIMUM CHARGE 3 PHASE: \$22.50 \$/mo

PUC-SIR-105 DOCKET NO. 2008-0083 ATTACHMENT 1 PAGE 2 OF 8

Hawaiian Electric Company Estimated TY 2007 Final Rates if Interim Award Becomes Final

SCHEDULE G

EFFECTIVE:		PROPOSED RAT	ES
CUSTOMER CHARGI 1 PHASE 3 PHASE	Ξ :	\$30.00 \$55.00	\$/MO \$/MO
ENERGY CHARGE:		19.8114	CENTS/KWH
PRIMARY VOLTAGE SECONDARY VOLTA		-2.1 -0.5	(%) (%)
MINIMUM CHARGE:	1 PHASE 3 PHASE	\$30.00 \$55.00	\$/MO \$/MO
Schedule TOU-C, Nor	n-Demand		
CUSTOMER CHARG	E:		
1 PHASE 3 PHASE		\$30.00 \$55.00	\$/MO \$/MO
Priority Peak Energy Cha Mid-Peak Energy Cha Off-Peak Energy Char	rge, ¢ / kWh	24.8114 21.8114 14.8114	CENTS/KWH CENTS/KWH CENTS/KWH
MINIMUM CHARGE:	1 PHASE 3 PHASE	\$30.00 \$55.00	\$/MO \$/MO

Hawaiian Electric Company Estimated TY 2007 Final Rates if Interim Award Becomes Final

SCHEDULE J

Minimum Charge

CUSTOMER CHARGE:		
1 PHASE	\$50.00	\$/MO
3 PHASE	\$70.00	\$/MO
DEMAND CHARGE:	\$9.78	\$/KW
ENERGY CHARGE:		
0-200 KWH/KW	16.1318	¢/KWH
200-400 KWH/KW	14.9838	¢/KWH
>400 KWH/KW	13.9548	¢/KWH
Minimum Charge	Dmd + Cust Chrg	
TP ADJUSTMENT (%)	-2.9	(%)
TS ADJUSTMENT (%)	-2.4	(%)
DP ADJUSTMENT (%)	-2.1	(%)
DS ADJUSTMENT (%)	-2.1 -0.5	(%) (%)
NETWORK ADJUSTMENT (%		(%) (%)
POWER FACTOR ADJ:	, 0.3 0.1	(%) (%)
FOWERT ACTOR ADD.	0.1	(70)
SCHEDULE TOU-C, Demand	Service	
CUSTOMER CHARGE:		
1 PHASE	\$50.00	\$/MO
3 PHASE	\$70.00	\$/MO
DEMAND CHARGE:	_	_
If max during Priority Peak	\$17.28	\$/KW
If max during Mid-Peak	\$9.78	\$/KW
ENEDOVICUADOE.		
ENERGY CHARGE:	20 5675	2020A0 1
Priority Peak	20.5675	¢/KWH
Mid-Peak	17.5675	¢/KWH
Off-Peak	12.0000	¢/KWH

Dmd + Cust Chrg

PUC-SIR-105 DOCKET NO. 2008-0083 ATTACHMENT 1 PAGE 4 OF 8

Hawaiian Electric Company Estimated TY 2007 Final Rates if Interim Award Becomes Final

SCHEDULE H

CUSTOMER CHARGE:

1 PHASE \$25.00 \$/MO 3 PHASE \$60.00 \$/MO

DEMAND CHARGE: \$10.00 \$/KW

ENERGY CHARGE: 16.4136 CENTS/KWH

MINIMUM CHARGE:

1 PHASE CUSTOMER + DEMAND 3 PHASE CUSTOMER + DEMAND

PUC-SIR-105 DOCKET NO. 2008-0083 ATTACHMENT 1 PAGE 5 OF 8

Hawaiian Electric Company
Estimated TY 2007 Final Rates if Interim Award Becomes Final

SCHEDULE PS

CUSTOMER CHARGE: \$350.00 \$/MO

DEMAND CHARGE:

0- 500 KW \$17.94 \$/KW 501-1500 KW \$17.31 \$/KW >1500 KW \$16.06 \$/KW

ENERGY CHARGE:

0-200 KWH/KW 14.5867 CENTS/KWH 200-400 KWH/KW 13.7884 CENTS/KWH >400 KWH/KW 13.4790 CENTS/KWH

MINIMUM CHARGE: CUST + DEMAND

SCHEDULE U

CUSTOMER CHARGE: \$350.00 \$/MO

DEMAND CHARGE:

If max during Priority Peak \$22.50 \$/KW
If max during Mid-Peak \$19.50 \$/KW

ENERGY CHARGE:

On-Peak 16.0903 ¢/KWH
Off-Peak 12.0000 ¢/KWH

MINIMUM CHARGE: CUST + DEMAND

PUC-SIR-105 DOCKET NO. 2008-0083 ATTACHMENT 1 PAGE 6 OF 8

Hawaiian Electric Company Estimated TY 2007 Final Rates if Interim Award Becomes Final

SCHEDULE PP

CUSTOMER CHARGE: \$400.00 \$/MO

DEMAND CHARGE:

0- 500 KW \$17.69 \$/KW 501-1500 KW \$17.06 \$/KW >1500 KW \$15.81 \$/KW

Directly Served from Substation credit -\$3.25 \$/KW

ENERGY CHARGE:

0-200 KWH/KW 14.4834 CENTS/KWH 200-400 KWH/KW 13.7002 CENTS/KWH >400 KWH/KW 13.3966 CENTS/KWH

MINIMUM CHARGE: CUST + DEMAND

SECONDARY METERING ADJUSTMENT: 0.2825 CENTS/KWH

PUC-SIR-105 DOCKET NO. 2008-0083 ATTACHMENT 1 PAGE 7 OF 8

Hawaiian Electric Company Estimated TY 2007 Final Rates if Interim Award Becomes Final

SCHEDULE PT

CUSTOMER CHARGE: \$400.00 \$/MO

DEMAND CHARGE:

0- 500 KW \$17.50 \$/KW 501-1500 KW \$16.88 \$/KW >1500 KW \$15.63 \$/KW

ENERGY CHARGE:

0-200 KWH/KW 13.9594 CENTS/KWH 200-400 KWH/KW 13.1875 CENTS/KWH >400 KWH/KW 12.8883 CENTS/KWH

MINIMUM CHARGE: CUST + DEMAND

PUC-SIR-105 DOCKET NO. 2008-0083 ATTACHMENT 1 PAGE 8 OF 8

Hawaiian Electric Company Estimated TY 2007 Final Rates if Interim Award Becomes Final

SCHEDULE F

CUSTOMER CHARGE: \$20.00 \$/MO

ENERGY CHARGE:

0-150 KWH/KW 21.8708 CENTS/KWH >150 KWH/KW 17.8968 CENTS/KWH

MINIMUM CHARGE:

EACH PT OF DELIVERY \$35.00 \$/MO SECONDARY METERING ADJ: 1.5 (%)

PUC-SIR-105 DOCKET NO. 2008-0083 ATTACHMENT 2 PAGE 1 OF 6

Hawaiian Electric Company Estimated TY 2009 Final Rates if Interim Award Becomes Final

SCHEDULE R

CUSTOMER C	CHARGE:
------------	---------

1 PHASE SERVICE	\$8.00	\$/mo
3 PHASE SERVICE	\$17.00	\$/mo

NON-FUEL ENERGY CHARGE: cents/kwh

0 - 350 kWh	7.4479
351 - 1200 kWh	8.4316
Over 1200 kWh	9.4155

BASE FUEL ENERGY CHARGE: 9.0708 cents/kwh

MINIMUM CHARGE 1 PHASE:	\$16.00	\$/mo
MINIMUM CHARGE 3 PHASE:	\$22.00	\$/mo

SCHEDULE TOU-R

CHIST		CHARGE:	
	\		

1 PHASE SERVICE	\$9.50	\$/mo
3 PHASE SERVICE	\$17.50	\$/mo

TOU ENERGY:

PRIORITY PEAK PERIOD	21.5187	cents/kwh
MID PEAK PERIOD	18.5187	cents/kwh
OFF PEAK PERIOD	13.0187	cents/kwh

MINIMUM CHARGE 1 PHASE:	\$17.50	\$/mo
MINIMUM CHARGE 3 PHASE:	\$22.50	\$/mo

Purchased Power Adjustment Clause 2.6100 cents/kwh

Schedule R, Schedule TOU-R

PUC-SIR-105 DOCKET NO. 2008-0083 ATTACHMENT 2 PAGE 2 OF 6

Hawaiian Electric Company Estimated TY 2009 Final Rates if Interim Award Becomes Final

SCHEDULE G

		PROPOSED	RATES	
EFFECTIVE:				
CUSTOMER CHARG 1 PHASE 3 PHASE	≣:	\$32.00 \$61.00		\$/MO \$/MO
ENERGY CHARGE:		15.8934		CENTS/KWH
PRIMARY VOLTAGE SECONDARY VOLTA		-2.1 -0.5		(%) (%)
MINIMUM CHARGE:	1 PHASE 3 PHASE	\$32.00 \$61.00		\$/MO \$/MO
Schedule TOU-G, Nor	n-Demand			
CUSTOMER CHARG 1 PHASE 3 PHASE	E:	\$32.00 \$61.00		\$/MO \$/MO
Priority Peak Energy (Mid-Peak Energy Cha Off-Peak Energy Char	rge, ¢ / kWh	20.8934 17.8934 8.5572		CENTS/KWH CENTS/KWH CENTS/KWH
MINIMUM CHARGE:	1 PHASE 3 PHASE	\$32.00 \$61.00		\$/MO \$/MO
Purchased Power Adj Schedule G, Schedu			2.4428	cents/kwh

Hawaiian Electric Company Estimated TY 2009 Final Rates if Interim Award Becomes Final

SCHEDULE J

CUSTOMER CHARGE: 1 PHASE 3 PHASE	\$55.00 \$77.00	\$/MO \$/MO
DEMAND CHARGE:	\$10.63	\$/KW
ENERGY CHARGE:	11.9248	¢/KWH
Minimum Charge	Dmd + Cust Chrg	
TP ADJUSTMENT (%)	-2.9	(%)
TS ADJUSTMENT (%)	-2.4	(%)
DP ADJUSTMENT (%)	-2.1	(%)
DS ADJUSTMENT (%)	-0.5	(%)
NETWORK ADJUSTMENT (%	6.0	(%)

SCHEDULE TOU-J, Demand Service

COCIONEIL CINARCE.	CUSTOMER CHARGE	:
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POWER FACTOR ADJ:

1 PHASE	\$55.00	\$/MO
3 PHASE	\$77.00	\$/MO

0.1

DEMAND CHARGE:

If max during Priority Peak	\$17.63	\$/KW
If max during Mid-Peak	\$10.63	\$/KW

ENERGY CHARGE:

Priority Peak	16.9248	¢/KWH
Mid-Peak	13.9248	¢/KWH
Off-Peak	8.4985	¢/KWH

Minimum Charge Dmd + Cust Chrg

Purchased Power Adjustment Clause 2.5015 cents/kwh Schedule J, Schedule TOU-J

(%)

PUC-SIR-105 DOCKET NO. 2008-0083 ATTACHMENT 2 PAGE 4 OF 6

Hawaiian Electric Company Estimated TY 2009 Final Rates if Interim Award Becomes Final

SCHEDULE DS

CUSTOMER CHARGE:

\$400.00

\$/MO

DEMAND CHARGE:

\$18.00

\$/KW

ENERGY CHARGE:

9.2192

¢/KWH

Minimum Charge

Dmd + Cust Chrg

Purchased Power Adjustment Clause

1.9885 cents/kwh

PUC-SIR-105 DOCKET NO. 2008-0083 ATTACHMENT 2 PAGE 5 OF 6

Hawaiian Electric Company Estimated TY 2009 Final Rates if Interim Award Becomes Final

SCHEDULE P

CUSTOMER CHARGE:

\$350.00 \$/MO

DEMAND CHARGE: \$19.37 \$/KW

ENERGY CHARGE: 10.5626 ¢/KWH

Minimum Charge Dmd + Cust Chrg

Purchased Power Adjustment Clause 2.0657 cents/kwh

SCHEDULE U

CUSTOMER CHARGE:

\$350.00 \$/MO

DEMAND CHARGE:

If max during Priority Peak \$23.37 \$/KW If max during Mid-Peak \$20.37 \$/KW

ENERGY CHARGE:

On-Peak 12.5626 ¢/KWH Off-Peak 8.9343 ¢/KWH

Minimum Charge Dmd + Cust Chrg

Purchased Power Adjustment Clause 2.0657 cents/kwh

PUC-SIR-105 DOCKET NO. 2008-0083 ATTACHMENT 2 PAGE 6 OF 6

Hawaiian Electric Company
Estimated TY 2009 Final Rates if Interim Award Becomes Final

SCHEDULE F

CUSTOMER CHARGE:

\$22.00

\$/MO

ENERGY CHARGE:

15.9494

CENTS/KWH

MINIMUM CHARGE:

EACH PT OF DELIVERY

\$35.00

\$/MO

SECONDARY METERING ADJ:

1.5

(%)

Purchased Power Adjustment Clause

3.0609 cents/kwh

Derivation of Power Purchase Adjustment, Using Power Purchase Expense by IPP, (\$000) (Energy and Capacity Expenses based on HECO T-6, Attachment 2 filed in May 15, 2009 settlement letter.

								0,000	Classification of		
	Energy 2009		Capacity 2009		Total	Proposed	Proposed Recovery Mechansim			Purchased Power Adjustment	
) I	Not				
		Test Year		Test Year			Included in				
							Purchased				
	Į.		ļ			Power		Tatal		*C	
		Α		В	C=A+B	Adjustment	Adjustment E	Totaí F=D+E	"Energy" G=D-A	"Capacity" H=B	
Kalaeloa	Fuel	108,708	<u></u>			108,708					
Naiaeioa											
	Additive	2,528			1	2,528					
	Non-Fuel (O&M)	22,167				·	22,167				
	Shortfall	0					0				
		400 400	Capacity	32,719			32,719				
Sub-Totals		133,403		32,719	166,122	111,236	54,886	166,122			
AES Hawaii	Fuel	44,058				44,058					
	O&M	29,959					29,959				
			Capacity	67,454	j		67,454				
			Bonus	923			923				
Sub-Totals		74,017		68,377	142,394	44,058	98,336	142,394	:		
H-POWER		30,714		6,725	37,439	30,714	6,725	37,439	'		
Other	l	<u> </u>							1		
Chevron		72			1				l		
Tesoro		411			[1		
Hoku Solar		29							1		
Sub-Totals		512	Non-firm	0	512	512	0	512			
Total		238,646		107,821	346,467	186,520	159,947	346,467	52,126	107,821	

Cross-check: 346,467 Cross-check: 159,947

Notes:

Classification of

^{1.} Totals may not add due to rounding

^{2.} Amounts for energy reflect only the cost of energy received, without adjustments for reactive or the meter charge in their contracts.

^{3.} The total IPP expense to be recovered through the proposed purchase power adjustment (Col. E) is composed of fine items that are either classified as Energy (Col. G) or Capacity (Col H).

Power Purchase Adjustment, Allocation by Rate Schedule, (\$000)

R/E

Ğ

Total Power Purchase Adjustment
 Demand-related (see page 1)
 Energy-related (see page 1)

\$159,947	
\$107,821	
\$52,126	

2. Allocate by Schedule
Demand Component Allocation percentage ¹
Energy Component Allocation percentage ²
Total Allocation (Dmd + Engy)
3. Gross up to revenue requirement Total Rev Tax rate = 8.885% Incl PSC of 5.885% PUC of 0.500% Franchise of 2.500% Source: T-16, pg3 (Taxes other than income)
4. Revenue to be recovered

5. MWh Sales by rate schedule3

6. Calculate adjustment in cents/kWh

						1		
	31.481%				ł .	1	100.000%	
	\$33, 9 43	\$5,916	\$32,591	\$13,580	\$20,997	\$794	\$107,821	
	27.433%	5.179%		15.783%		1	100.000%	
	\$14,300	\$2,700	\$14,414	\$8,227	\$12,233	\$252	\$52,126	
	\$48,243	\$8,616	\$47,005	\$21,807	\$33,230	\$1,046	\$159,947	
	1.09751	1.09751	1.09751	1.09751	1.09751	1.09751	Calc: If Rate = 8.885	5%
-			•				Then M'plier = 1.097	
								1
	\$ 52,947	\$9,456	\$51,589	\$23,934	\$36,470	\$1,148	Check: \$175,544 Rev	ł
	402,547	45,450	\$31,505	V 20,004	000,470	\$1,140	\$15,597 Tax	
							\$159,947 To IPPs	;
							Check:	
	2,028,600	387,100	2,062,367	1,203,627	1,765,506	37,500	7,484,700	
	2.6100	2.4428	2.5015	1.9885	2.0657	3.0609		
	# E0.017	# 0.455	\$51,589	\$23,934	\$36,470	£1 140	\$175,544 Gross	
ı	\$52,947	\$9,456	\$31,369	\$23,934	\$30,470	\$1,148	\$170,044 GIOSS	

DS

F

Check:

Notes:

Verify revenue collected

- 1. Apply D1 for Production Dmd. See HECO-WP-2203, Page 4 (where P = P-SEC + P-Nwk).
- 2. Apply E1 for Production Engy. See HECO-WP-2203, Page 4 (where P = P-SEC + P-Nwk).
- 3. HECO-2214 provides MWh Sales for each of the (6) rate schedules. Menoher sub in DS (rather than P).